The Benton Report as Research

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Abstract

The Benton Report is apparently intended to be read as presenting research findings. When its research methods are assessed, however, a consistent pattern is found. The data were collected carefully but have not been analyzed, reported, or interpreted with the care one would expect. The statistical analysis of the public opinion poll data leaves much to be desired. The focus group anecdotes were presented too prominently given their unrepresentative nature. The visions of the future of public libraries presented as coming from library leaders were invalidated by a failure to establish the leadership status of the informants. The overall pattern of findings of this research seems clear and persuasive, but caution is advised in accepting the detailed claims presented.

Introduction

The report *Buildings, Books, and Bytes* (Benton Foundation, 1996) presented ideas about the role and function of public libraries in a period during which digital information is becoming increasingly important, with a view to influencing the direction in which public library services will evolve in the future. Any report that seeks to influence the evolution of public libraries, or to contribute to the ongoing debate about the role and function of public libraries, must present ideas that are credible and persuasive. One way to achieve credibility and persuasiveness is to base the ideas presented on sound research. The use of rigorous and accepted research techniques helps to assure the reader that the ideas

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presented are based on fact rather than speculation and on careful observation of the real world rather than on unsupported opinion.

Although new research methods are sometimes introduced, scientific research has gradually developed a body of research methods that maximize the validity of the results obtained, minimize the probability of error, and enhance the reliability of the ideas generated. This is the understanding of research and the body of knowledge that can be found explicated in textbooks on research methods, or in the many research methods courses taught in schools of library and information science. Research conducted using accepted methods provides a foundation for the credibility and persuasiveness of the findings of research and for the ideas that are associated with those findings.

It should be noted parenthetically that research is not the only way to obtain credible and persuasive ideas. Some people are persuaded by the revelations of scripture. Some believe the horoscope to be a reliable and credible predictor of future events. Others trust intuition or the speculation of pundits to direct their thinking. In the long-term debate about the evolving nature of public libraries, however, appropriate research must play an important role. Just as the Public Library Inquiry report (Berelson, 1949) provided a basis for the development of contemporary library services, so today's research may suggest persuasive and credible options for future roles and services in public libraries.

Research is defined as a systematic investigation of some phenomenon. In considering the Benton Report from the perspective of research, the first question that must be addressed is: Is the Benton Report a research report? In other words, does this report present ideas that are based on the systematic investigation of phenomena? The second question that must be addressed, and which follows from the first, is: If the Benton Report is based on research, is it based on good research? In other words, should the research methods used inspire confidence in the reliability and validity of the results obtained and thus lend credibility, persuasiveness, and influence to the ideas generated?

Research in the Benton Report

There is internal evidence that the authors of this report understood it to be a research report or at least to contain research. The first sentence of the preface refers to the document as "this study" (page 1), and the terms "study" and "findings" are repeated throughout the preface and the executive summary. Further, one specific aspect of the report, the public opinion poll, is specifically labeled "research" twice on page 3. It is interesting to note that the term "research" is used throughout the document to refer to the public opinion poll, but it is never used to refer to the process of gathering opinions from Kellogg grantees or to the focus group. This pattern of language use may suggest that the authors

held different opinions about the various components they were assembling, accepting the public opinion poll as research while relegating the remaining elements to some other status.

On the basis of this internal evidence, it appears that there is adequate reason to proceed under the assumption that this report was intended to be read, in whole or in part, as presenting research. This assumption provides justification to proceed to the second question and to examine the nature of the research methods employed. Before examining those research methods, however, it is necessary to identify the research questions addressed in the Benton Report. In research, as in the Mikado's justice, one must "let the punishment fit the crime." The research methods used must be appropriate to the research questions asked. Unfortunately, the report does not explicitly present its research questions. As Hernon and Metoyer-Duran (1993) and Metoyer-Duran and Hernon (1994) noted, the omission of a clear research question is not an uncommon phenomenon in library and information science research. In the case of the Benton Report, it is possible to infer the research questions from the text of the preface and the executive summary.

One of the purposes of this report was to inform Kellogg grantees "about where the public supports—or fails to support—libraries as they confront the digital world" (p. 1). Stripped of its rhetoric, this statement becomes the simple research question, Does the public support libraries? One further emendation, altering the too-general term "libraries" to the more accurate term "public libraries," produces a plausible first research question for this report:

1. Does the public support public libraries?

Further, the report was intended to reflect "both the library leaders' visions and the American people's expectations" (p. 1). From this statement we can infer two additional research questions:

2. What are library leaders' visions of public libraries? and
3. What are the American people's expectations of public libraries?

Research Methods: Appropriateness and Quality

The Public Opinion Poll

To investigate the first and third research questions, the Benton Foundation hired Lake Research and the Tarrance Group to conduct a nationwide public opinion poll and supplemented this poll with a focus group. This combination of survey and market research methods seems entirely appropriate to address research questions that focus on public attitudes and perceptions.

The telephone survey was completed by Opinion Research Corporation of Princeton, New Jersey. Trained interviewers contacted a national

probability sample of 1,015 adults using a random-digit dial approach. Interviewers asked respondents the questions developed for this survey, perhaps as part of a larger interview session that included questions from other surveys, and recorded the answers using a computer-assisted telephone interviewing system.

As one would expect from the research organizations that conducted the research, a competent and professional job was done. The sample was chosen using appropriate sampling techniques and was of adequate size for the purpose. The Benton Report notes that the maximum margin of error for questions asked of all respondents was ±3.1 percent. Presumably that margin of error is based on a 95 percent confidence interval. What the report does not emphasize is that, of the twenty-nine questions listed in the appendix, only nine were asked of all respondents. The remaining twenty questions were asked of split samples. Although the overall sample size was 1,015 respondents, the sample size for twenty of the questions was only 507 or 508 respondents. This does not in itself present problems for the margin of error. A quick calculation of the margin of error for question 6, which was asked of 507 respondents, shows a margin of error of ±4.3 percent, which seems perfectly acceptable in this kind of survey. The use of split samples does place additional burdens on the researchers to present their descriptive data clearly. This issue is addressed below in the discussion of the report's presentation of descriptive data.

In response to a request from this author, the Benton Foundation provided a copy of the data file generated by the polling firms. Accordingly, the comments in this article that reflect on the handling, presentation, and discussion of the survey data are based on more detailed information than is available to the ordinary reader of the Benton Report. One of the key elements that is missing from the report is a complete account of the questions asked on the survey. The appendix lists the twenty-nine questions that solicit opinions and perceptions about public libraries or related topics. Not listed in the appendix are the demographic variables that were also obtained from all respondents. For the record, the following demographic variables were found in the data:

Variables relating to the location of respondents:
- Area code
- State
- Zip code
- Census region

Variables relating to the respondent:
- Gender
- Is respondent head of household (Y/N)
- Employment status
- Occupation

Marital status
Own/rent dwelling
Education
Age
Race
Income

Variables relating to family of respondent:

Dual income family (Y/N)
Number of members of household
Ages of children

Variables relating to technology in respondent's household:

Cable television
Number of household phones

Presentation of Descriptive Data

In the Benton Report's appendix, proportions of responses to each question were given. These proportions appear to be accurate, although some slight differences between the published proportions and the statistical file have been introduced through rounding. It seems clear that the proportions quoted were based on weighted data: the sampling system weighted the individual responses to produce results that more closely reflected the age, sex, geographic region, and racial distribution of the population. Fortunately, the weighted proportions were generally within a few tenths of a percent of the unweighted proportions, so the selection of which proportions to report is not of concern.

Within the text of the Benton Report, a number of descriptive findings were highlighted, and some of these give rise to concern about the care with which the data have been handled. One example: "Equal numbers of Americans believe libraries should spend their resources on digital information, as opposed to book and other printed information" (p. 18). It should be noted first that there was no question on the survey that opposes digital information acquisition to print information acquisition. The comparison made by this statement was apparently based on an interpretation of the pattern of responses to questions 10, 11, 19, and 20. Yet the pattern of responses to these questions fails to support the contention of equality in consumer preference. Rather, there was a much stronger preference for print materials than for access to digital information. Only by combining the responses for very, moderately, and slightly important is it possible to obtain an apparent equality among perceptions, and combining the responses in this way is at best misleading.

Similar problems with the presentation of descriptive findings occurred elsewhere in the report. For example, also on page 18, the report stated that "the public says it is willing to pay additional taxes and fees for these services" (i.e., "digital and traditional collections"). Again, it is important to note that no question asked of the respondents to the survey provided these data. There was no single question that asked if people

would be "willing to pay additional taxes and fees for digital and traditional collections." This statement was an interpretation, presumably of responses to question 28, which asked about providing additional funds to "continue operation." And, given that the only other choice offered to respondents was "reducing the services the library offers," it is hardly surprising that most respondents opted for tax increases or user fees to continue library operations. It is hard to interpret choices made in this kind of devil's alternative as constituting a high level of willingness to pay extra taxes or fees. The authors apparently were aware of the tenuous nature of their interpretation and qualified it somewhat in a later discussion (p. 23).

Another area in which the discussion in the Benton Report can be faulted relates to the decision of the polling companies to split their sample. Although this split, and its rationale, was not discussed in the report, it appears that the researchers wished to ask some questions in two different ways. They split the sample to ask about libraries as community activities centers. Half of the respondents were asked question 6 while the other half were asked question 7. Similarly, the researchers apparently wanted to distinguish between the importance of certain library services to respondents personally and the importance of these services to respondents who were thinking about libraries in the context of the community they serve. So they asked half of the respondents questions 10-18 and the other half questions 19-27. In the report, however, the authors tended to ignore the results from split sample *B* and to report only the results from split sample *A*. This occurred in the discussion on page 19 of the ranking of library services, in the discussion on page 25 of the roles of librarians, and in the table on page 27. Ignoring half of one's data is not the best way to present descriptive results.

Finally, there were at least two important misstatements of fact in the Benton Report. On page 20, the report stated that "34 percent of respondents agreed that this [i.e., setting up computers to access library information at remote locations] was a very important service." The results show that the correct percentage here was 19 percent. This seems to be a case of repeating the number from the previous sentence rather than citing the correct number. Then, on page 21, the report stated that: "Altogether, 81 percent of those queried said they had access to a personal computer either at home or at work." This finding is impossible given that 40 percent of respondents to question 1 stated that they had no access to computers. In fact, as indicated in the report, 44 percent had home access and 37 percent had work access. But 22 percent had access to computers at *both* home and work. Thus the total who had access to a personal computer either at home or at work is 59 percent and not 81 percent.

The presentation of the descriptive data in this report shows signs of

an excessive degree of interpretation on the part of the authors and of a lack of care in their handling of the data. Readers must, accordingly, be very cautious in accepting the report's statements about what the public opinion poll revealed. While the general pattern of results may be sufficiently clear to be immune from errors of interpretation and reporting or from misstatements of fact, the details of the findings as communicated by the Benton Report appear to be less than completely trustworthy.

Presentation of Effects

The Benton Report presented as facts a variety of influences, associations, and correlations among variables. In the language of statistical analysis, these are sometimes called "effects" since one variable is said to affect another. In the Benton Report, two types of effects were discussed: (1) the association of demographic variables with opinions or perceptions, and (2) the association of opinion or perception variables with each other.

Much of the text of the report that discussed the public opinion poll was devoted to a consideration of demographic effects. Age, gender, minority status, education, income, and the presence of children in the household were all seen as influencing opinions about public library roles, services, and finances. There is, however, some question about the basis for these claims of demographic effects. Effects such as these are typically established by hypothesis testing. The researcher establishes a hypothesis that a certain demographic variable affects a certain opinion variable, and specific statistical tests are applied to test that hypothesis. Certain outcomes of the statistical tests are held to support a hypothesis, while other outcomes lead to the rejection of the hypothesis.

In the Benton Report, there was no indication that any hypothesis testing was done. No statistical tests were presented or discussed, nor was there any indication of whether the hypotheses were supported (or not supported) by the analysis. There are several possible explanations of this failure to follow standard research practice. First, it is possible that the authors of the report wished to have their prose unencumbered by the usual arcane apparatus of statistical reporting. In a report of this sort, this desire would be quite understandable. However, in such a circumstance one would at least expect a footnote or parenthetical remark to note that appropriate statistical tests were conducted, and that all effects reported were significant at $p < .05$. Since such a note was omitted from the Benton Report, the reader is left uncertain about the credibility of the effects reported.

A second explanation of the absence of statistical reporting is that no hypothesis tests were actually done. Some researchers suggest that public opinion polling is descriptive research rather than hypothesis-testing

research. Frequently, the questions are asked of respondents, not because a theoretical foundation has given rise to specific hypotheses but rather out of a sense of curiosity. In such descriptive research, hypothesis testing might be considered to be unnecessary. Such an approach to survey research is, however, quite unacceptable. In descriptive research, there is one question for which the answer must be established clearly: Does the effect occur only in the sample or can it reliably be generalized to the population from which the sample was drawn? Hypothesis testing clearly distinguishes those effects that can be generalized to the larger population from those that are found only in the sample (and accordingly may be attributed to sampling error). If the authors of the Benton Report wished to say, as they did on numerous occasions, that their results reflected the opinions of the American public, then they had to establish the reliability of that claim through hypothesis testing.

The final explanation for a lack of statistical analysis in this report is that the authors simply "eye-balled" the data and drew conclusions on the basis of their impressions. There is some evidence that this explanation is the correct one. As a spot-check on the effects reported, hypothesis tests were conducted on the data from the opinion poll that related to the reported demographic effects on opinions about the importance of funding for library buildings (i.e., questions 14 and 23). In the report, age, education, and income levels were reported as affecting the respondents' opinions on this topic. Using data supplied by the Benton Foundation, Spearman rank-order correlations were calculated for these six effects. The results are presented in Table 1.

Table 1. Demographic effects on opinions about funding for library buildings

	Question 14	*Question 23*
Age	$rho = -.076$, $p > .08$	$rho = -.073$, $p > .1$
Education	$rho = .051$, $p > .28$	$rho = .108$, $p < .02$*
Income	$rho = .1$, $p < .05$*	$rho = -.025$, $p > .6$

Two of these hypothesis tests (indicated with an asterisk) indicated effects that can be generalized to the larger population, while four tests showed that the effects were not significant and cannot be generalized. In the cases of both education and income, the effects of the demographic variables on opinions about the importance of funding for library buildings were equivocal. When the question was asked one way, there was a slight but significant correlation, but when the question was asked the other way, the effect disappeared. There was no significant correlation between age and the opinions solicited in these questions.

In the Benton Report's statements concerning demographic effects on opinions about funding for public library buildings, there were a num-

ber of errors. These included reporting effects that were actually not significant and failing to account for ambiguous findings. This pattern of errors is consistent with researchers "eye-balling" cross-tabulations without conducting the appropriate hypothesis tests. It follows that much of the discussion of the findings of the public opinion poll is suspect. Readers should exercise great caution in accepting the effects claimed for demographic variables on opinion variables in this report.

As noted above, the Benton Report also made reference to effects in which one opinion or perception variable was associated with another. Probably the most prominent of these references is on page 17, repeated on page 21, that associated library use with bookstore visits and access to personal computers. These associations were also analyzed using appropriate hypothesis tests to ascertain whether this set of reported effects was supported. In this case, the Spearman rank-order correlation between self-reported frequency of bookstore visits and public library visits was *rho* = .471, $p < .001$. The Cramer's V measure of association between computer access and frequency of bookstore access was $V = .359$, $p < .001$, while the measure of association between computer access and frequency of library visits was $V = .244$, $p < .001$. All of these hypothesis tests were highly significant, indicating that the findings reflected associations that are found in the population as well as in the sample. But the magnitude of the correlation and associations was somewhat overstated in the Benton Report. Rather than "high" correlations, they were moderate at best. And in one case (the association between public library visits and computer access), the magnitude of the association was modest. This analysis supports the suggestion that the authors of the report did not make use of appropriate hypothesis tests and based their statements on impressions garnered from cross-tabulations. Again, readers would be well advised to treat statements in this report regarding the effects of opinion or perception variables on other opinion or perception variables with great caution.

Presentation of Multiple Comparisons

Once hypotheses have been tested and effects have been found to be significant, it is frequently appropriate in research of this type to conduct multiple comparisons to determine the origin of the significant effect. For example, if a positive association were discovered between household income and perceived importance of spending money on library buildings, it would be appropriate to investigate which income groups considered this particular expenditure of funds to be more important.

In the Benton Report, one multiple comparison assumed a role of prominence. On page 4, it was stated that, "the youngest Americans polled, those between the ages of 18 and 24, are the ... least enthusiastic of any age group about the importance of libraries in a digital future." This

point was restated on pages 18 and 19 and perhaps in a rather vague reference on page 17 that stated that this age group "registered weak support for library digital activities." In order to assess the quality of the reporting of multiple comparisons in the Benton Report, this statement was selected for careful analysis. There was clearly a significant effect of age on perceptions of the future importance of public libraries. But multiple comparisons revealed that this effect was associated only with the age group 21-24, whose opinions differed from the opinions in all older age groups. The age group 18-20, on the other hand, expressed opinions about this question that did not differ from any of the older age groups. Accordingly, this is not an effect that can be appropriately described in terms of young respondents differing from older respondents. Rather, it is a case of one small and idiosyncratic group of respondents differing from all others. The interpretation of the age effect that emerged from careful statistical analysis differs in an important way from that presented in the report. Caution in accepting the statements in the report about the opinions of specific age or other demographic groups is recommended.

In summary, the public opinion poll was conducted in a professional and competent manner. However, it appears that the data were not analyzed appropriately nor presented carefully. Because of these deficiencies of analysis and interpretation, it is difficult to place confidence in the findings presented in the Benton Report. This survey plays a major role in addressing two of the three research questions of the project. Of the first research question, Does the public support public libraries? the answer is clearly positive. The problems of analysis and interpretation outlined above cannot obscure the clarity of this general answer. It is only when the report considered the differences in support among different population segments or for different services that its results lack credibility.

The third research question of this report, What are the American people's expectations of public libraries? was also addressed by the public opinion poll, and the answer again was unequivocal. The American people's expectations of public libraries are clearly traditional yet evolving. Their expectations of the role and function of public libraries include the traditional elements of a place with books and services for children and the role of digital information provision. Again, the general response to the research question is not called into question by the deficiencies of data handling and analysis, but the details about the expectations of different population segments, or the expectations regarding particular services, must be treated with caution.

The Focus Group

Focus groups are an important tool in marketing research. They

permit the collection of rich data about consumer attitudes. At the same time, care must be exercised to ensure that the participants in the focus group represent the marketplace in some reasonable manner. This is usually accomplished by using multiple focus groups to account for the natural variability of opinions among individuals and among social groups.

The particular focus group used in this research consisted of eleven participants, all white. They were more highly educated than the respondents to the public opinion survey. And they represented a single geographic area. Since public library services are intensely local in nature, it is far from clear that people's experiences in Montgomery County, Maryland, can be representative of the American public's experiences with public libraries. To their credit, the authors of the report qualify their discussion of the focus group findings by noting that it should not be taken as representative (page 31). On the other hand, it is hard to understand how conscientious researchers, acknowledging a major gap in the way their research was conducted, would fail to make any effort to improve its quality. With the time and resources available to the Benton Foundation and its partners in this research, surely two or three additional focus groups could have been organized and the additional findings analyzed.

The discussion guide prepared for this focus group by Lake Research, and provided to the author by the Benton Foundation, was an admirable instrument. It led the participants through a discussion of many different roles and functions that public libraries serve, then allowed the participants to ruminate or speculate about the future of public libraries. Given the high quality of this guide, it can be assumed that the focus group was conducted in a professional manner, and that its discussion was tape recorded and transcribed following standard focus group procedures. At this point, however, a gap appears. At no point in the report was the analysis of this transcript described. It is to be hoped that standard content analysis was applied (see Allen & Reser, 1990) but, given the gaps in statistical analysis of the opinion poll, this hope may be rather too optimistic. In the absence of a description of the analysis upon which the report of the focus group session was based, it might be wise to withhold judgment about the specific details reported. And since the focus group session was clearly not representative of public attitudes in general, the attention given to specific positive or negative user experiences in the report might be considered to be out of place.

On the other hand, the findings of the focus group, when taken on the whole, correspond to the "traditional, but evolving" picture of the library's role that emerged from the opinion poll. There was a remarkable lack of consensus about the direction that the evolution might take, and this lack of consensus is hardly surprising. From the research per-

spective, it would have been more appropriate to limit the discussion of the focus group in the report to this general level rather than to focus attention on individual anecdotes.

The "Library Leaders' Visions"

Neither the public opinion poll nor the focus group addressed the second research question inferred for this project. This was, "What are library leaders' visions of public libraries?" To address this research question, the Benton Foundation began by defining library leaders as "the institutional grantees of the Kellogg Foundation" (p. 3). Representatives of these institutions were first asked to prepare "written vision statements," then were interviewed by telephone to obtain further elaboration of their opinions. Finally, they participated in a workshop that allowed them to discuss their opinions in a variety of settings.

It is not the purpose of this article to discuss the nature of the opinions of these informants, nor the desirability of including "leaders' visions" in this project but rather to comment on the research methods employed in this part of the research project. If the research question posed above were to be directed to any research methods class in an examination setting, a passing grade would be assigned to any student whose answer included and elaborated the following three steps: (1)identify the leaders, (2) collect the data, and (3) analyze the data.

It is the first step that obviously was missing from this project. It is not the intention here to cast aspersions on the leadership status of any of the institutional grantees of the Kellogg Foundation but simply to point out that such status would be better demonstrated than assumed. Leaders exist because there are followers. In other words, leaders are those who are recognized by a community as being influential and as having ideas that challenge and stimulate the members of that community. Here, the community in question is clearly the public library community: a large aggregation of public library staff members, administrators, and trustees whose opinions are far from uniform, but who (it may be assumed) recognize certain individuals as opinion leaders.

Fortunately, there exists an excellent model for identifying library leaders in the dissertation of Alice Gertzog (1989) which has been widely published (see for example, Gertzog, 1992). The Benton Foundation team could have adopted some or all of Gertzog's methods for identifying leaders or could have taken the criteria that she isolated and applied them to the public library community as a whole. Either of these processes would have produced a credible list of library leaders. In the absence of the crucial first step of systematically identifying the opinion leaders of the public library community, however, the collection and analysis of opinions from a group of individuals was meaningless from a research perspective. It is, accordingly, hardly worthwhile to critique the

methods employed in the preparation of the "library leaders' visions" component of the Benton Report. For what it is worth, the collection of data appears to have been done in a credible and professional manner, including the collection of written "vision statements," the completion of follow-up telephone interviews, and the generation of a variety of discussions at a national conference. As in other phases of the research, however, little or no evidence of the quality of the data analysis was provided by the authors. As in the case of the focus group, one can hope (without much basis for that hope) that standard content analysis techniques were employed. It is disappointing that the Benton Report does not include visions from public library leaders that were obtained using acceptable research practices.

Conclusion

The picture that has emerged from this analysis is a consistent one. In terms of data collection, the research was generally solid. In terms of data analysis, interpretation, and reporting, the research left much to be desired. Indeed, the data analysis was so inadequate that the reader would be well advised to discount any details presented by the report. On the other hand, these shortcomings cannot obscure the general pattern of findings which mirror those of other public opinion research on this topic.

In the specific instance of the "library leaders' visions" component of the research, the entire process of collecting and analyzing the data was invalidated by the failure to appropriately identify library leaders. From the research perspective, readers would be well advised to ignore the sections of the Benton Report that presented those opinions. The opinions in the report may be stimulating and of interest, but they fail entirely to address the research question. Viewed as research, the Benton Report was seriously flawed, but there remains a possibility that, in judging its quality as research, one is doing the report and its authors an injustice. Perhaps the authors had no intention of producing a report that would pass the rigorous standards of research. Perhaps they were hoping to achieve a level of persuasiveness and influence in the debate about the future of public libraries through some other mechanism than through research. Perhaps readers should approach the text of the report as they would a newspaper article or a piece in a popular magazine, ignoring all of the heavy details of statistical analysis, content analysis, and validation of leadership status.

If this interpretation of the Benton Report is appropriate, and it seems at least plausible, then the reader is left to judge the report on its rhetorical impact rather than on its research rigor. It is possible that the report will have greater influence on the debate about the future role and services of public libraries as rhetoric than as research. But if readers care

about the accuracy, reliability, and validity of the ideas presented, they will exercise great care in interpreting its findings. The research was simply not of adequate quality to support the report's ideas and claims.

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